

ABSTRACT OF THE DISCLOSURE

5 A system and method are disclosed for detecting and preventing bridge loops in a relatively low cost bridge module designed for installation in a network hub. The bridge operates to monitor an intra-hub communication path of the network hub to detect bridge protocol data units transmitted by a switching fabric within the network hub. The bridge module stores a MAC source address of a bridge protocol data unit detected on the intra-hub communications path, and forwards the bridge protocol data unit through its external communication ports to respective network segments. The bridge module monitors its external communication ports for any data unit having a destination address matching a bridge multicast address. When a data unit having a destination address matching the bridge multicast address is detected, the bridge module compares the MAC source address of that data unit to the previously stored MAC source address from the bridge protocol data unit detected on the intra-hub communication path. In the event that the MAC source address of the data unit detected on the external communication port matches the previously stored MAC source address, the bridge module disables operation of the respective one of its external communication ports at which the data unit was received. In one embodiment of the disclosed system, the bridge module further monitors its external communications ports for routing protocol messages. In the event that a routing protocol message is detected on one of those external communications ports, the bridge module disables that port.

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